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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/815,009

03/31/2004

James Christopher Deepak

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9222

21186

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10/17/2008

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EXAMINER

PHAM, LONG

ART UNIT

PAPER NUMBER

2814

MAIL DATE

DELIVERY MODE

10/17/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/815,009	<b>Applicant(s)</b> DEEPAK ET AL.	
	<b>Examiner</b> Long Pham	<b>Art Unit</b> 2814	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 August 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,4-12,14-17 and 40-43 is/are pending in the application.
- 4a) Of the above claim(s) 6-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4,5,12,14-17 and 40-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>08/20/08</u> .  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

In light of the newly found prior art, the indication of allowability of claims 3, 13, and 40-43.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Master et al. (US pub 20030037959) in combination with the applicant's admitted prior art (AAPA) of this application.

With respect to claim 1, Master et al. teach a component lead comprising (see figs. 1-3 and associated text and para [0035]):  
a lead finish comprising about 80-85 percent by weight of lead, about 1-5 percent by weight of silver, about 6-12 percent by weight of antimony, and balance of tin disposed over the component lead but fails to teach the lead finish comprising about 82-84 percent by weight of lead, about 2-4 percent by weight of silver, about 9-11 percent by weight of antimony, and balance of tin.

However, in the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). See MPEP 2144.05. Note that in this case, the claimed range of lead substantially overlap of the range taught by Master et al.

With respect to claim 4, Master et al. further teaches the lead is coupled to a lead or wire of a surface mount component. See figs. 1-3 and associated text.

With respect to claim 5, Master et al. fail to teach coupling the lead or wire or solder to a electronic or downhole electronic components or circuitry or assembly (including amplifier or processor or pressure sensor) or transducer or assembly.

AAPA teaches using lead or wire or solder to couple electronic components or circuitry assembly (including downhole transducer or assembly) (including amplifier or processor or pressure sensor) to provide electrical connections between electronic components or circuitry assembly (including downhole transducer or assembly). See page 1 of this application.

It would have been obvious to one of ordinary skill in the art of making semiconductor devices to incorporate the teaching of AAPA into the device Master et al. to attain the above benefit.

Claims 12, 14, 15, 16, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Master et al. (US pub 20030037959) in combination with the applicant's admitted prior art (AAPA) of this application.

With respect to claim 12, Master et al. teach a system comprising (see figs. 1-3 and associated text and para [0035]):

a component lead having a lead finish disposed over the component lead, the lead finish comprising about 80-85 percent by weight of lead, about 1-5 percent by weight of silver, about 6-12 percent by weight of antimony, and balance of tin but fails to teach the lead finish comprising about 82-84 percent by weight of lead, about 2-4 percent by weight of silver, about 9-11 percent by weight of antimony, and balance of tin.

However, in the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). See MPEP 2144.05. Note that in this case, the claimed range of lead substantially overlap of the range taught by Master et al.

With respect to claims 12, 14, 16, and 17, McAndrew fails to teach coupling the lead to a electronic or downhole electronic components or circuitry or assembly (including amplifier or processor or pressure sensor) or transducer or assembly.

AAPA teaches using lead to couple electronic components or circuitry assembly (including downhole transducer or assembly) (including amplifier or processor or

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pressure sensor) to provide electrical connections between electronic components or circuitry assembly (including downhole transducer or assembly). See page 1 of this application.

It would have been obvious to one of ordinary skill in the art of making semiconductor devices to incorporate the teaching of AAPA into the device Master et al. to attain the above benefit.

With respect to claim 15, it is submitted that a downhole transducer would be inherently capable of measuring a downhole temperature or pressure.

Claims 40-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over the applicant's admitted prior art (AAPA) of this application in combination with Master et al. (US pub 20030037959).

With respect to claim 40, AAPA teaches a electronic component or assembly including a downhole transducer coupled to a circuit or a circuit trace included in a circuit attached to a component or solder but fail to teach that the component or solder including a first amount between about 78% and about 82% by weight of lead, a second amount between about 9% and about 11% by weight of antimony, a third amount between about 3 % and about 12% by weight of silver, and a balance of tin.

Master teaches solder composition including about 80-85 percent by weight of lead, about 1-5 percent by weight of silver, about 6-12 percent by weight of antimony, and balance of tin to improve the interaction between the carrier and solder. See paras [0035] and [0030].

It would have been obvious to one of ordinary skill in the art of making semiconductor devices to incorporate the teaching of Master et al. into the device of AAPA to attain the above benefit.

Master teaches a component lead having a lead finish disposed over the component lead, the lead finish comprising about 80-85 percent by weight of lead, about 1-5 percent by weight of silver, about 6-12 percent by weight of antimony, and balance of tin but fails to teach the lead finish comprising about

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82-84 percent by weight of lead, about 2-4 percent by weight of silver, about 9-11 percent by weight of antimony, and balance of tin.

However, in the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). See MPEP 2144.05. Note that in this case, the claimed range of lead substantially overlap of the range taught by Master et al.

With respect to claims 41, 42, 43, the coupling of a processor, a data acquisition system, and a filter to the circuit is well-known in semiconductor art.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Long Pham whose telephone number is 571-272-1714. The examiner can normally be reached on Mon-Frid, 10am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Wael Fahmy can be reached on 571-272-1705. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Primary Examiner  
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/Long Pham/

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